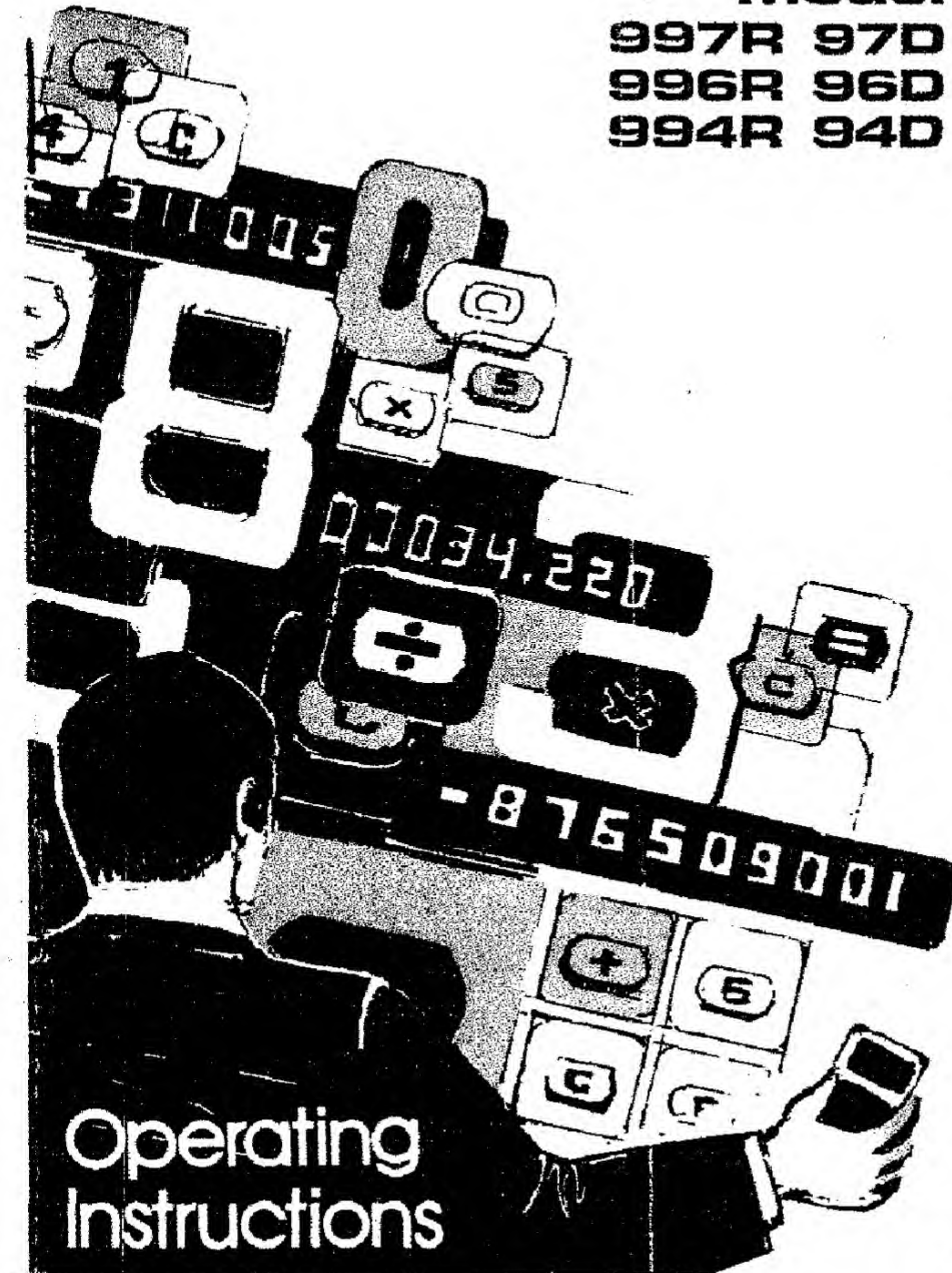


commodore
Electronic Calculators
Custom Green Line

Model
997R 97D
996R 96D
994R 94D



**Operating
Instructions**

PLACE
STAMP
HERE

Please print or type address of
Commodore/CBM Office

Introduction

Congratulations on your selection of a portable electronic calculator. It is a quality built, precision instrument designed to provide you with many years of service-free, dependability. Your new calculator is capable of performing a wide range of problem-solving assignments . . . instantly, silently and easily.

A tiny, solid state chip of silicon, no larger than this letter "M", contains the brainpower for your calculator. Engineers refer to this miracle of miniature wizardry as, "Super Large Scale Integration," (S-LSI). It is your assurance of optimum reliability and increased durability.

Carefully review the instructions covering your instrument. Work through the examples illustrated, and within a very short time you will become proficient in the many advantages offered by your new calculator.

Power

Disposable Battery Model (D)

Your calculator uses two standard 1.5 volt batteries type "AA" available at most drug, department and camera stores. To operate, disconnect the adaptor cord and turn power switch "ON" (an interlocking switch in the AC socket will prevent battery use if the plug remains connected). When the battery weakens, display will dim. When you are replacing the batteries, please observe the polarity of batteries. Polarity of batteries are printed on the bottom of battery compartment. To prevent the damage from battery leak, please remove the batteries, when the calculator will not be used for the long period of time.

Rechargeable Battery Models (R)

AC Operation

Connect the charger to any standard electrical outlet and plug the jack into the Calculator. After the above connections have been made, the power switch may be turned "ON." (While connected to AC, the batteries are automatically charging whether the power switch is "ON" or "OFF.")

Battery Operation

Disconnect the charger cord and push the power switch, "ON," an interlock switch in the calculator socket will prevent battery operation if the jack remains connected. With normal use

a full battery charge can be expected to supply about 2 to 3 hours of working time.

When the battery is low, figures on display will dim. Do not continue battery operation, this indicates the need for a battery charge. Use of the calculator can be continued during the charge cycle.

Battery Charging

Simply follow the same procedure as in AC operation. The calculator may be used during the charge period. However, doing so increases the time required to reach full charge. If a power cell has completely discharged, the calculator should not be operated on battery power until it has been recharged for at least 3 hours, unless otherwise instructed by a notice accompanying your machine. Batteries will reach full efficiency after 2 or 3 charge cycles.

Controls and Indicators

"ON" Switch: Turns calculator "ON" and "OFF".

C Clear Key: Press once to erase last entry. Press twice to clear calculator and Display of all numbers, except those in Memory.

+ Addition Key: Completes the previously entered function and enters an addition command.

- Subtraction Key: Completes the previously entered function and enters a subtraction command.

Controls and Indicators

X Multiplication Key: Completes the previously entered function and enters a multiplication command.

÷ Division Key: Completes the previously entered function and enters a division command.

• Decimal Point Key: Enters a decimal point.

0 to 9 Data Keys: Enters figures from zero to nine (capacity: 8 digits).

Controls and Indicators

= Equals Key: Pressed once, it executes prior function and displays result. It also enables automatic constant calculations in addition, subtraction, multiplication and division.

% Percent Key: Commands calculator to set up decimally correct percentage answer, and prepares for mark-up or discount calculations.

EX Exchange Key: Reverses role of constants, as follows:

A × B EX (machine will now perform B × A)
A ÷ B EX (machine will now perform B ÷ A)
A + B EX (machine will now perform B + A)

Controls and Indicators

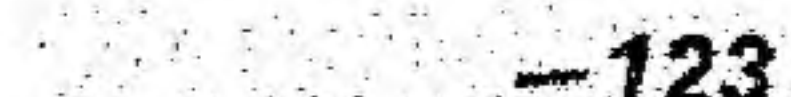
MC Memory Clear Key: Clears all numbers from the Memory.

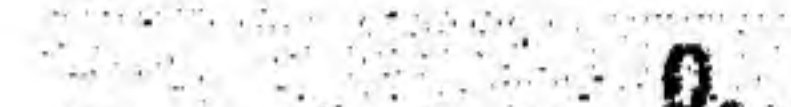
M+ Memory Plus Key: Adds the number appearing in the Display to the Memory. Display remains unchanged.

M- Memory Minus Key: Subtracts the number appearing in the Display from the Memory. Display remains unchanged.

Controls and Indicators

MR Memory Recall Key: Copies the contents of the Memory into the Display. Memory remains unchanged.

Minus Sign Indicator: Minus sign will appear to the immediate left of a negative number  -123

Power-ON Indicator: Appears at the right side of the Display as  0.

Controls and Indicators

MT Memory Total Key: Copies the contents of the Memory into the Display and clears all numbers from Memory.

Decimal Point Indicator: Automatically appears to the right of any number entered, unless inserted in another sequence by use of the Decimal Key. With fractional numbers, it will be preceded by a zero.

Memory in Use Indicator: When the Memory is in use a decimal point will appear in the left-most digit space.

Overflow Indicator: Indicates a calculation result exceeding more than 10^8 digits. Appears as **E**

Preliminary Instructions

1. To clear

- A. Touch the C key twice.
- B. Cleared display will be:

0.

2. To enter (write a number)

Example: enter 123.45

- A. First, clear by touching C twice.
- B. Then touch number and decimal keys for 123.45 one at a time. Always start with the left hand digit and progress from left to right.

Display will then be:

123.45

3. To clear an incorrect entry

Example: 48 + 12 is your calculation

- A. You have already entered 48
- Display is:

48.

Preliminary Instructions

- B. You now touch the + key.
Display will be: **48.**
- C. Then you enter 13 by mistake.
The display is: **13.**
A mistake!
- D. To clear 13, touch the C key.
Display will be: **0.**

Note: Use C during, or immediately after entry of a number.

- E. Then enter '12'.
Display will be: **12.**
- F. Finally, touch the = key for answer
Display will be: **60.**

Overflow Interpretation

The overflow indicator "E" will appear when the Display capacity of the calculator is exceeded.

Preliminary Instructions

The overflow is cleared by dividing by 10 enough times to bring the decimal point into the Display. Calculations may now continue noting the result must be multiplied by 10^N , where N is the number of times you divided to recapture the decimal. Maximum capacity is 10^{48} .

5. To change role of constant (multiplicand to multiplier)

Press	Read
a. CC	0.
b. 24 X	24.
c. 4	4.
d. EX	24.
e. =	96.
f. 5	5.
g. =	20.

Calculations

Addition

Example: $16.39 + 9.83 = 26.22$

Press	Read
a. CC	0.
b. 16.39 +	16.39
c. 9.83	9.83
d. =	26.22

Subtraction

Example: $12.81 - 3.6 = 9.21$

Press	Read
a. CC	0.
b. 12.81 -	12.81
c. 3.6	-3.6
d. =	9.21

Credit/Balance

Example: $-200 + 456 - 321 = -65$

Press	Read
a. CC	0.
b. -200	200.
c. +	-200.
d. 456	456.
e. -	256.
f. 321	-321.
g. =	-65.

Multiplication

Example: $2.375 \times 6.8 = 16.15$

Press	Read
a. CC	0.
b. 2.375 ×	2.375
c. 6.8	6.8
d. =	16.15

Calculations

Division

Example: $-9 \div 3 = -3$

Press	Read
a. CC	0.
b. -9	-9.
c. \div	-9.
d. 3	3.
e. =	-3.

Press

Read

d. +	72.
e. 3	3.
f. -	75.
g. 7	-7.
h. \div	68.
i. 4	4.
j. =	17.

Mixed Calculation

Example: $12 \times 6 + 3 - 7 \div 4 = 17$

Press	Read
a. CC	0.
b. $12 \times$	12.
c. 6	6.

Constant Addition and Subtraction

Example: $4 + 7 + 7 - 8 - 8 = 2$

Press	Read
a. CC	0.
b. $4 +$	4.

Calculations

Press	Read
c. 7	7.
d. =	11.
e. =	18.
f. - 8	-8.
g. =	10.
h. =	2.

Constant Multiplication

Example: $22 \times 22 = 484$,
 $22 \times 7 = 154$,
 $22 \times 34 = 748$

Press	Read
a. CC	0.
b. 22 X	22.

Press	Read
c. =	484.
d. 7	7.
e. =	154.
f. 34	34.
g. =	748.

Constant Division

Example: $-8 \div 3 \div 3 = -0.888888$

Press	Read
a. CC	0.
b. - 8	-8.
c. \div	-8.
d. 3	3.
e. =	-2.666666
f. =	-0.888888

Calculations

Raising a Number to a Power

Example: $11^3 = 1331$

Press	Read
a. CC	0.
b. 11 X	11.
c. =	121.
d. =	1331.

Percent

Example: 5% of 220 = 11

Press	Read
a. CC	0.
b. 220 X	220.
c. 5	5.
d. %	0.05
e. =	11.

Add on

Example: $(430 + 20) + 5\% \text{ tax} = 472.5$

Press	Read
a. CC	0.
b. 430 +	430.
c. 20	20.
d. +	450. principal
e. 5	5.
f. %	22.5 tax
g. =	472.5 total

Discount

Example: $(600 + 50) - 10\% \text{ discount} = 585$

Press	Read
a. CC	0.
b. 600 +	600.
c. 50	50.

Calculations

Press		Read
d. —	principal	650.
e. 10		-10.
f. %	discount	-65.
g. =	total	585.

Memory

Example #1: $-8 + (15 \times 3) - (20 \div 5) = 33$

Press	Read
a. MC CC	0.
b. 8	8.
c. M —	8.
d. 15 ×	15.
e. 3	3.
f. =	45.
g. M +	45.
h. 20 ÷	20.

Press	Read
i. 5	5.
j. =	4.
k. M —	4.
l. MT	33.

Example #2: $\frac{50}{40 - (4 \times 8)} = 6.25$

Press	Read
a. MC CC	0.
b. 40	40.
c. M +	40.
d. 4 ×	4.
e. 8	8.
f. =	32.
g. M —	32.
h. 50 ÷	50.
i. MR	8.
j. =	6.25

Calculations

Use of EX Key with Memory

Example: What is the total interest and cost of a \$456 loan borrowed for 71 days at 8½ % ?

Press		Read
a. MC CC		0.
b. 456		456.
c. M +	.	456.
d. X	.	456.
e. 71	.	71.
f. X	.	32376.
g. 8.5	.	8.5
h. %	.	0.085
i. ÷	interest .	2751.96
j. 360	.	360.
k. + M +	.	7.6443333
l. MR	total cost of loan .	463.64433
m. EX	total interest .	7.6443333

Guarantee

Your new electronic calculator carries a parts and labor guarantee for one year from date of purchase.

We reserve the right to repair a damaged component, replace it entirely, or, if necessary, exchange your machine.

If you own a portable calculator which uses an AC adapter, the adapter must be returned with your machine when service is required.

In order to receive free service under this guarantee at a Commodore Service Center, you are required to pay all postage, shipping and insurance charges when returning your calculator to the Commodore Service Center and enclose a check or money order for \$2.50 to cover handling charge, return postage and insurance.

This guarantee is valid only when a copy of your original sales slip or similar proof of purchase accompanies your defective machine.

This guarantee applies only to the original owner. It does not cover damage or malfunctions resulting from fire, accident, neglect, abuse or other causes beyond our control.

The guarantee does not cover the repair or replacement of plastic housings or transformers damaged by the use of improper voltage. Nor does it cover the replacement of expendable accessories and disposable batteries.

The guarantee will also be automatically voided if your machine is repaired or tampered with by any unauthorized person or agency.

In order to record your guarantee you must complete the registration card and mail it within ten days from date of purchase.

This guarantee supersedes, and is in lieu of, all other guarantees whether expressed, or implied.

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Scarborough, Ontario

CBM Business Machines, Ltd.

Eaglescliffe Industrial Estate
Stockton on Tees Cleveland County
TS16 0PN England

Commodore Buromaschinen GmbH.

6079 Sprendlingen
Robert-Bosch-Str 12A
West Germany

Commodore Japan Ltd.

Taisei-Denshi Bldg.
8-14, Ikue 1-Chome
Asahi-Ku, Osaka 535

Commodore France S.A.

39 Rue Victor Masse
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